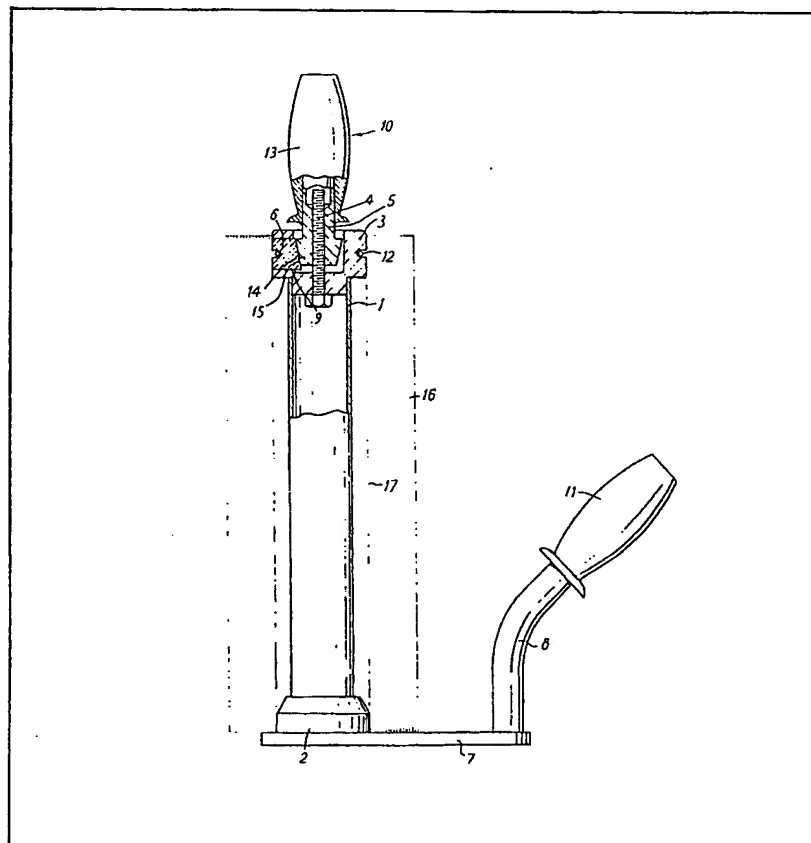
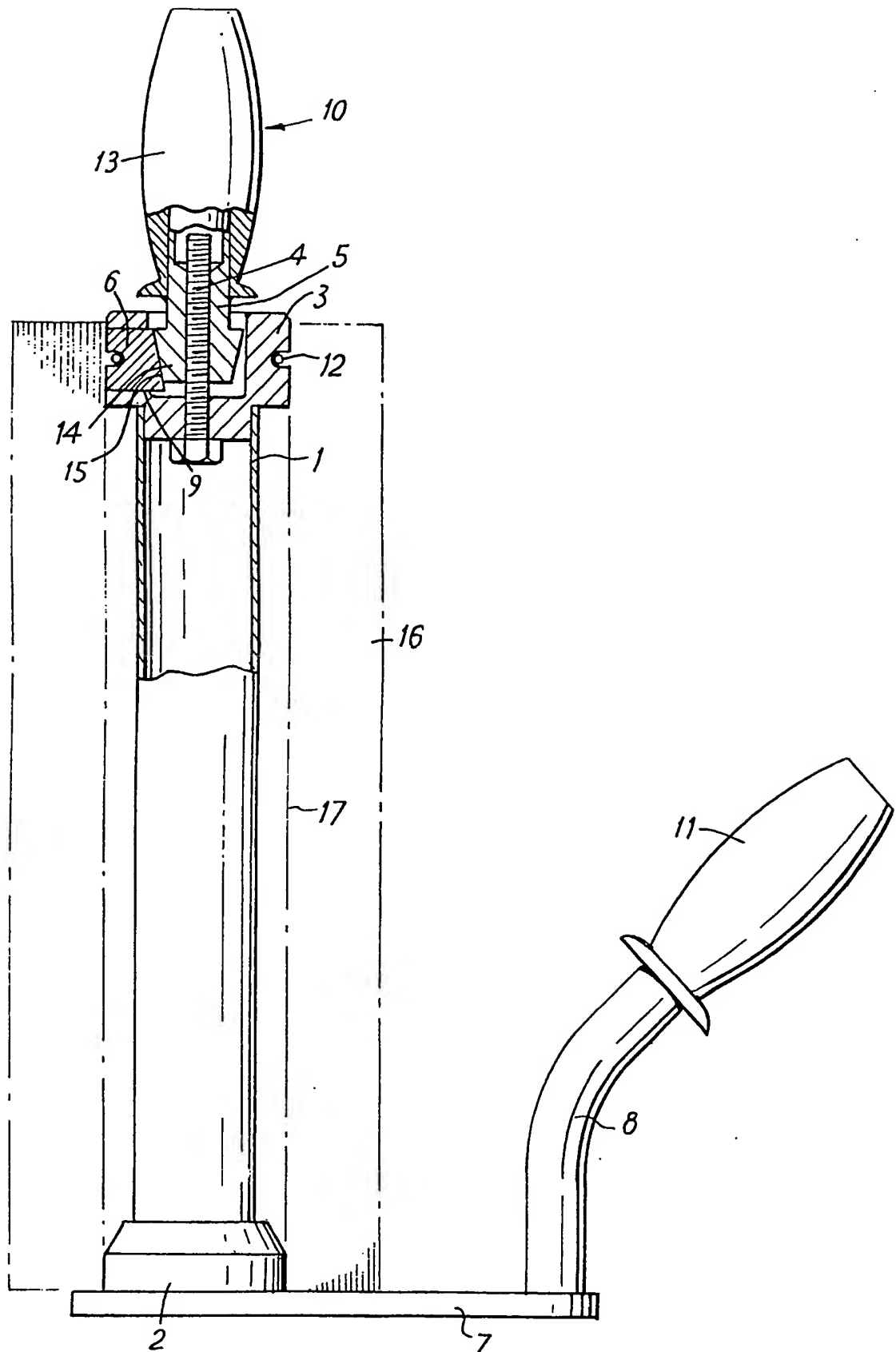


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(54) Film wrap dispenser

(57) This invention provides a hand-held dispenser for carrying a roll (16) of wrapping film and dispensing the film therefrom, the dispenser having a shaft (1) on which such a roll can be located for unwinding of the film by axial rotation of the roll about the shaft, a handle (10), and at least one drum brake shoe (6) operable by the said handle to act peripherally on such a roll on the shaft to control the tension in the film as it is dispensed from the roll in a wrapping operation.





SPECIFICATION

Film wrap dispenser

5 This invention relates to dispensers for wrapping film and provides a hand-held dispenser for carrying a roll of wrapping film and dispensing the film therefrom, the dispenser having a shaft on which such a roll can be located for unwinding of the film by axial rotation of the roll about the shaft, a handle, and at least one drum brake shoe operable by the said handle to act peripherally on such a roll on the shaft to control the tension in the film as it is dispensed from the roll in a wrapping operation.

15 Most usually, the said brake shoe is operable by the said handle to act on the inner periphery of such a roll on the shaft, being mounted for example in a brake housing carried by or forming part of the shaft; there will most preferably be a plurality of such drum brake shoes spaced uniformly circumferentially of the shaft.

The or each brake shoe is preferably resiliently biased away from braking engagement with such a roll on the shaft.

25 The said handle is suitably mounted for axial rotation to operate the brake shoe or shoes.

The operation of the brake shoe or shoes is suitably caused by axial movement of the said handle.

30 In its movement to operate the drum brake shoe or shoes, a portion of the handle preferably engages directly with the shoe or shoes (e.g. by way of a cam and/or wedge action) to move the shoe or shoes radially into peripheral braking contact with such a roll on the shaft.

35 In the currently preferred embodiments, the said handle is coaxially aligned with the shaft and is mounted for axial rotation relative thereto; on axial rotation of the handle, a portion thereof acts, preferably directly, on the or each said brake shoe to move it radially outwards relative to the shaft into braking engagement with the inner periphery of such a roll on the shaft. Most suitably, the handle is in threaded engagement with the shaft or a member fixed relative to the shaft, so that axial rotation of the handle in one direction causes axial movement of the handle relative to the shaft with a portion of the handle exerting a wedging action against the or each brake shoe to push it radially outwards relative to the shaft.

45 An embodiment of the invention will now be described by way of example only, with reference to the accompanying drawing, in which the single Figure is an elevation view, partly in section, of a film wrap dispenser according to the invention.

50 The illustrated dispenser has a hollow cylindrical shaft 1 having fixedly secured around one end a collar 2 by way of which the shaft is secured perpendicular to a baseplate 7. The other end of the shaft 1 is closed by and fixedly secured to a brake housing 3 from which a stud 4, fixed relative to the brake housing, projects axially of the shaft. Brake housing 3 has brake shoes 6 located in peripheral openings 9 for movement radially of the housing and shaft, the

shoes being urged radially inwardly under the resilient bias of a circlip 12. In this case three openings 9 and shoes 6 are spaced uniformly around the periphery of brake housing 3, only one being visible in the sectional view in the accompanying drawing. A handle 10 coaxial with shaft 1 has an external hand grip portion 13 from which projects an extension 5 which is screw threaded onto stud 4 and has a frusto-conical end portion 14 in engagement with the complementarily shaped radially inner surfaces 15 of segments 6. On axial rotation in one direction the handle moves axially towards base 7 with engagement of its projecting portion 5 with brake shoes 6 moving these shoes radially outwards against the bias of circlip 12; on rotation of the handle in the opposite direction it moves axially away from base 7 whereupon circlip 12 returns brake shoes 6 radially inwardly. The device is provided with a second hand grip 11 fixedly secured around a handle shaft 8 which is attached to base 7.

In use, a reel of film wrap 16 is located as indicated in broken lines about shaft 1 with its core 17 disposed around and in close proximity to collar 2 and brake housing 3. The operator carries the dispenser with one hand grip in each hand, and as the reel 16 rotates axially to pay out film wrap as the latter is wrapped around an object or objects, the operator turns handle 10 as necessary to move brake shoes 6 radially into or from braking engagement with the inner surface of reel core 17 so as to maintain the required tension in the dispensed film wrap. In applying the film wrap, the operator may move around the object being wrapped, or the latter may be rotated relative to the operator on a turntable.

Whilst the illustrated embodiment described in detail above is particularly effective in use, numerous variations can of course be made. For example, any number of brake shoes from one upwards can be provided, though there will preferably be a plurality uniformly spaced circumferentially of the shaft. Furthermore, whilst a circlip is illustrated for resiliently biasing the brake shoes radially inwards, other forms of spring bias can be employed; thus adjacent brake shoes may be joined by torsion coil springs acting to urge the adjacent shoes towards one another and hence urging each radially inwardly relative to the shaft; a particularly suitable such embodiment employs a pair of directly opposed brake shoes urged radially inwards towards one another by a pair of symmetrically disposed such torsion springs joining them together. The illustrated arrangement in which the brake shoes are disposed at the top of the shaft has proved to be the most satisfactory and effective in practice, but the brake shoes could instead be provided elsewhere on the shaft, at its base, or at an intermediate region along its length; similarly, with appropriate modification of the operating handle, one or more drum brake shoes may be provided at each of a plurality of positions along the length of the shaft at and/or between its ends.

Even more drastic alteration of the illustrated

embodiment is possible whilst embodying the inventive feature of a carrying handle operative to effect drum braking of a roll on the shaft. For example, various mechanical linkages between operating handle and brake shoe or shoes less direct than those mentioned above are feasible, and the operating handle need not be on the end of the shaft. Two carrying handles will normally be provided for convenience, one for each hand, and even where one of these is attached to an end of the shaft it may be the other which is operative to effect the braking action; for example, with appropriate mechanical linkages, it would be possible for the handle 11 of the illustrated embodiment to be operable instead of and/or in addition to handle 10 to effect the braking action. Differences in configuration, e.g. as regards the disposition and orientation of the carrying handles, compared to that illustrated are also possible; for example the illustrated shaft 8 which is aligned with shaft 1 could bend towards rather than away from shaft 1 and/or could be bent out of alignment with shaft 1; and it could instead be straight in which case it might be parallel to shaft 1 or inclined in or out of alignment with shaft 1. Furthermore, handle 11 could be connected to shaft 1 other than by way of a shaft 8 and platform 7.

CLAIMS

1. A hand-held dispenser for carrying a roll of wrapping film and dispensing the film therefrom, the dispenser having a shaft on which such a roll can be located for unwinding of the film by axial rotation of the roll about the shaft, a handle, and at least one drum brake shoe operable by the said handle to act peripherally on such a roll on the shaft to control the tension in the film as it is dispensed from the roll in a wrapping operation.
2. A dispenser according to claim 1 when the said brake shoe is operable by the said handle to act on the inner periphery of such a roll on the shaft.
3. A dispenser according to claim 2 wherein there is a plurality of such drum brake shoes spaced uniformly circumferentially of the shaft.
4. A dispenser according to any of claims 1 to 3 wherein the or each brake shoe is resiliently biased away from braking engagement with such a roll on the shaft.
5. A dispenser according to any of claims 1 to 4 wherein the said handle is mounted for axial rotation to operate the brake shoe or shoes.
6. A dispenser according to any of claims 1 to 5 wherein operation of the brake shoe or shoes is caused by axial movement of the said handle.
7. A dispenser according to any of claims 1 to 6 wherein, in movement of the said handle to operate the shoe or shoes a portion of the handle engages directly with the shoe or shoes to move the shoe or shoes radially into peripheral braking contact with such a roll on the shaft.
8. A film wrap dispenser substantially as hereinbefore described with reference to the accompanying drawing.
9. A method of wrapping substrate with wrapping film from a roll thereof carried by a hand-held dispenser, the method being substantially as hereinbefore described.

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